

PATENTS  
108041-0007IN THE CLAIMS:

75. (new) A system for programming a household appliance having an electronic control that manages the execution by the appliance of a plurality of programs consisting of treatment phases, the system including:

- C1
- a microcontroller,
  - a first memory associated with the microcontroller, the first memory storing as write protected during the manufacturing of the appliance first information that is used by the control system to execute a given number of first programs of the appliance, the first programs allowing the immediate use of the appliance after the completion of manufacturing;
  - a control panel residing on the appliance, the control panel including user-operated controls for the selection and the control of the execution of the first programs,
  - communication means for interfacing the control system to an external electronic programming device,
  - a writeable and erasable second memory for storing second information provided by the external programming device, once the appliance has been marketed and/or installed at a user's premises, the second information
  - allowing the control system to execute second programs which are in addition to and different from the first programs, and
  - allowing the user to select and command the execution of the second programs through the control panel residing on the appliance,
- the second information being encoded and stored in the second memory for an undetermined time, until the user directs a subsequent modification or cancellation of the second information through the external programming device.

76. (new) The system according to claim 75, further including a means for preventing the storage within the second memory of information which might lead to unsatisfactory results or performance of the appliance.

PATENTS  
108041-0007

77. (new) The system according to the claim 75, wherein the first information relates to the subdivision of the programs into various treatment phases and respective phases are characterized by determined values of control parameters of internal devices or actuators of the appliance.

78. (new) The system according to claim 77, wherein at least a part the first information relates to the values of control parameters that characterize the various phases into which the first programs are subdivided.

79. (new) The system according to claim 77, wherein at least a part of the second information relates to the values of the control parameters characterizing the various phases into which the second programs are subdivided.

C1  
80. (new) The system according to claim 77, wherein the first and/or second information includes for a given phase the duration of the phase, a temperature value being characteristic of the phase, the configuration and/or the mode of operation for the internal devices or actuators of the appliance during the phase.

81. (new) The system according to claim 75, wherein the second information comprises the respective second programs.

82. (new) The system according to claim 81, wherein the data identifying a given second program comprises an order number.

83. (new) The system according to claim 81, wherein the data identifying a given second program comprises a name in alphabetical, numerical and/or graphic characters.

84. (new) The system according to claim 81, wherein the data identifying a given second program comprises numerical information and alphabetical or alphanumerical in-

PATENTS  
108041-0007

formation.

85. (new) The system according to claim 75, wherein the first memory comprises at least a part of the program memory of the microcontroller.

86. (new) The system according to claim 75, wherein the first memory comprises a memory of the ROM type.

87. (new) The system according to claim 75, wherein the second memory comprises a memory of the EEPROM type.

88. (new) The system according to claim 75, wherein the external programming device is a personal computer.

89. (new) The system according to claim 75, wherein control system further includes means for executing the second programs under the direct control of the external programming device.

90. (new) The system according to claim 75, wherein means are provided for using the control system of the appliance as an executor of controls coming from the external programming device, with the appliance behaving like a peripheral device connected to the external programming device.

91. (new) A household appliance electronic control system, the control system comprising:

- a microcontroller,
- a first memory associated with the microcontroller, the first memory containing first information for use by the control system to execute a given number of first programs of the appliance, the first programs allowing the immediate use of the appliance once the manufacturing of the same has been completed, the first memory being write-

PATENTS  
108041-0007

- protected for inhibiting the modification of the first information relating to the first programs,
- a second memory associated with the microcontroller, for storing second information once the appliance has been marketed and/or installed at a user's premises, the second information allowing the control system to execute second programs which are addition to and different from the first programs, the second memory being writeable and erasable for allowing the storage, and/or the later modification of the second information relating to the second programs,
  - a communication interface for connecting the control system to an external programming device, through which the second information is provided,
  - a control panel residing on the appliance for the selection and the control of the execution of the first programs and the second programs.

92. (new) The household appliance according to claim 91, wherein the appliance is a cooking oven.

93. (new) The household appliance according to claim 91, wherein the appliance is a washing machine.

94. (new) The household appliance according to claim 91, wherein the communication interface is a serial port.

95. (new) The household appliance according claim 91, wherein the communication interface is an adapter for connecting the control system to a home bus, in particular a power line carrier bus.

96. (new) The household appliance according claim 91, wherein the control panel includes a display device.

97. (new) The household appliance according to claim 96, wherein the control

PATENTS  
108041-0007

system provides for the sequential displaying on the display device of data identifying the second programs.

98. (new) A method for programming a household appliance having an electronic control system that executes a plurality of programs, the method including the steps of:

- C1
- storing first information within a first memory of the control system during the manufacturing stage of the appliance, the first information being used by the control system to control the execution of a given number of first programs of the appliance, the first programs allowing the immediate use of the appliance once the manufacturing of the same has been completed,
  - write protecting the first information to inhibit the modification of the first information after the information has have been stored in the first memory,
  - controlling at desired times the selection and the command of the execution of the first programs through a control panel on the appliance,
  - after the appliance has been marketed or installed at a user's premises, interfacing the control system to an external programming device;
  - obtaining, through the external programming device, second information for allowing the control system to execute second additional programs that differ from the first programs, the second information comprising data identifying the second additional programs;
  - storing the second information, in a writeable and erasable manner within a second memory of the control system;
  - controlling at desired times the selection and command of the execution of the second additional programs using the identifying data that is part of the second information;
  - selectively modifying or deleting the second information, as desired by the user.

99. (new) The method according to claim 98, further including the step of reading out the first and/or second information from the control system by means of the external programming device.

PATENTS  
108041-0007

100. (new) The method according to claim 99, further including the steps of  
- modifying, by means of the external programming device, the first information read out,

- storing the relevant modified information within the second memory and pairing the modified information with data identifying the modified information as being associated with a given second additional program.

101. (new) The method according to claim 98, further including the step of establishing a connection between the external programming device and a remote system, in particular an Internet site.

d 102. (new) The method according to claim 101, further including the step of downloading the second information from the remote system through the external programming device.

103. (new) The method according to claim 101, further including the step of sending the second information to the remote system through the external programming device.

104. (new) The method according to claim 103, further including in the step of loading the second information contained in the second memory into a memory of the external programming device.

105. (new) The method according to claim 98, wherein a user, through a user interface provided for the external programming device

- displays data,
- edits the second programs to subdivide a given program to be edited into various treatment phases and display the values of control parameters of internal devices or actuators of the appliance for each of the phases of the second programs, and
- stores the second information relating to the edited second programs within the sec-

PATENTS  
108041-0007

ond memory.

106. (new) The method according to claim 105, wherein the editing further comprises the displaying of the control parameters in a graphic form.

107. (new) The method according to claim 105, wherein the editing further comprises entering and displaying data that identifies a selected program to be edited.

CI 108. (new) The method according to claim 105, wherein the editing further comprises the selection of a phase of interest among the phases into which a selected program to be edited is subdivided and displaying at least some of the control parameters relating to the selected phase.

109. (new) The method according to claim 105, wherein the editing further comprises the generation and representation of a Cartesian plane showing, on the abscissa, the duration of the various phases forming the program to be edited, and on the ordinates, another parameter relating to the phases, in particular a temperature value.

110. (new) The method according to claim 105, wherein the editing further comprises the suppression of at least one of the phases into which the program to be edited is subdivided.

111. (new) The method according to claim 105, wherein the displaying depicts, in real time, data relating to the progress or status of a program being run on the appliance.

PATENTS  
108041-0007

112. (new) The method according to claim 105, wherein the program to be edited is a cooking program for an oven and the control parameters include:

- the duration of a selected phase, and/or
- the temperature to be reached within the oven during the selected phase, and/or
- the configuration and/or operating mode of heat sources of the oven (1), and/or
- the type of ventilation of possible use during the selected phase, and/or
- the modes of a possible use of a grill heater during the selected phase.